

NOTES

- ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
- USE M20 GRADE CONCRETE AND F8 500 GRADE FOR STEEL.
- CLEAR COVER TO MAIN REINFORCEMENT- (a) 50MM FOR FOUNDATION (b) 25MM FOR BEAMS (c) 40MM FOR COLUMNS
- PRIOR TO AND DURING CONCRETING ALL BOLTS SHALL BE SECURELY HELD IN POSITION BY USE OF TEMPLATE.
- BEFORE COMMENCEMENT OF CONSTRUCTION USING THIS DESIGN, CLIENT/CONTRACTOR SHALL CARRY OUT DETAILED SOIL INVESTIGATION OF EVERY SITE.
- THIS FOUNDATION DESIGN SHALL NOT BE USED IN CASE HIGHLY SOIL ARE FOUND AT ANY DEPTH DURING SOIL INVESTIGATION.
- CONCRETE SHALL BE MECHANICALLY MIXED & VIBRATED.
- SPACING OF BARS SHALL NOT BE MORE THAN 50% AT ANY LOCATION.
- PROPER CURING OF CONCRETE SHALL BE DONE.
- BENDING OF BARS SHALL BE AS PER IS:2502.
- ANY DISCREPANCY SHOULD BE BROUGHT TO THE CONSULTANT'S ATTENTION.

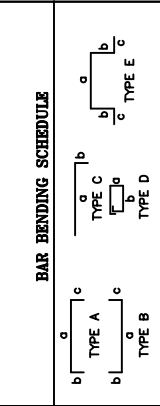
GENERAL DETAILS

S.No	DESCRIPTION	DETAILS
1	SOIL BEARING CAPACITY	10.00 T/SQM
2	DRY DENSITY OF SOIL	1.8 T/SQM
3	ANGLE OF REPOSE	30.00 DEGREE

BILL OF MATERIALS

ITEM	UNIT	TOTAL
EXCAVATION	CUM	43.6
PCC-(1:4:8)	CUM	1.95
RCC-M20	CUM	7.34
STEEL-F8500	KG	680

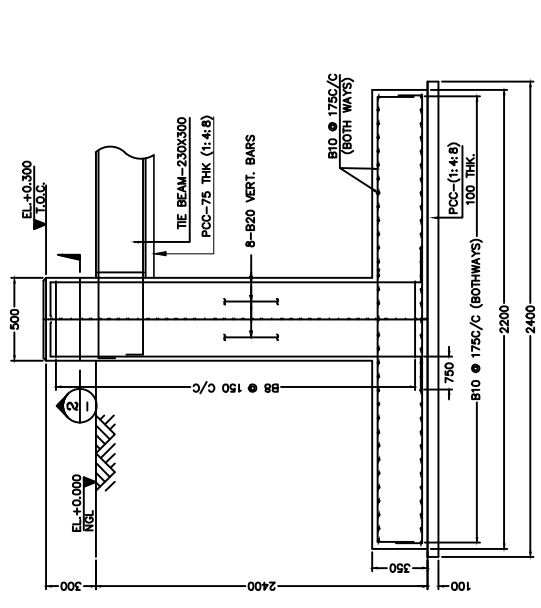
CHAIRS SHALL BE PROVIDED WHEREVER REQUIRED



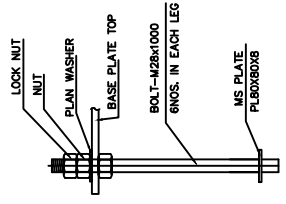
REVISION NOTES

REV. NO.	DESCRIPTION	DATE	SIGN.
DRAWN	CHECKED	APPROVED	DATE
Bhutan Telecom	Bhutan Telecom	Bhutan Telecom	14-12-2023

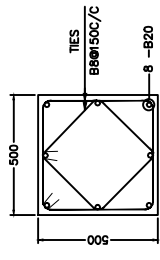
CLIENT: BHUTAN TELECOM LTD.
 DESIGN BY: BHUTAN TELECOM LTD.
 PROJECT: GENERIC ISOLATED FOUNDATION DESIGN
 TITLE: FOUNDATION DETAILS FOR 20M HIGH TRIANGULAR TOWER
 SBC : 10 T/SQM
 DRAWING No. SH. NO. REV.
 BT-2024 Project



SECTION 1

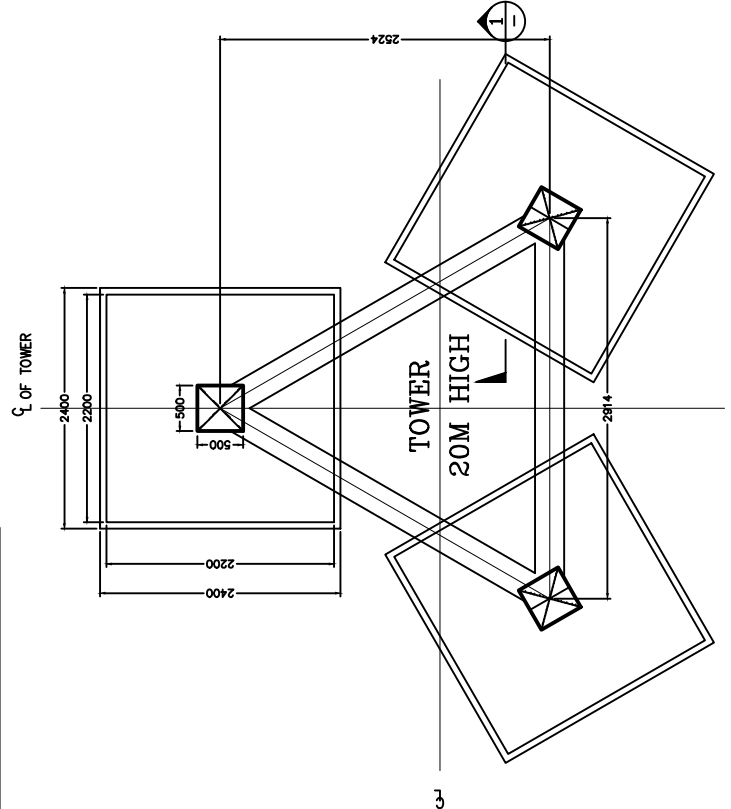


ANCHOR BOLT

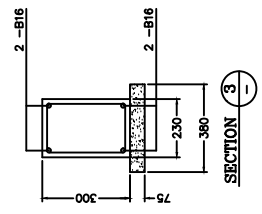


SECTION 2

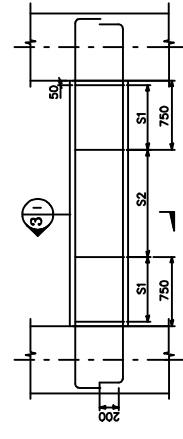
COLUMN 500X500



FOUNDATION KEY PLAN



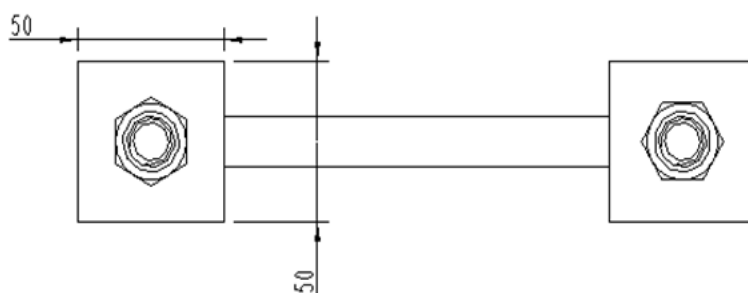
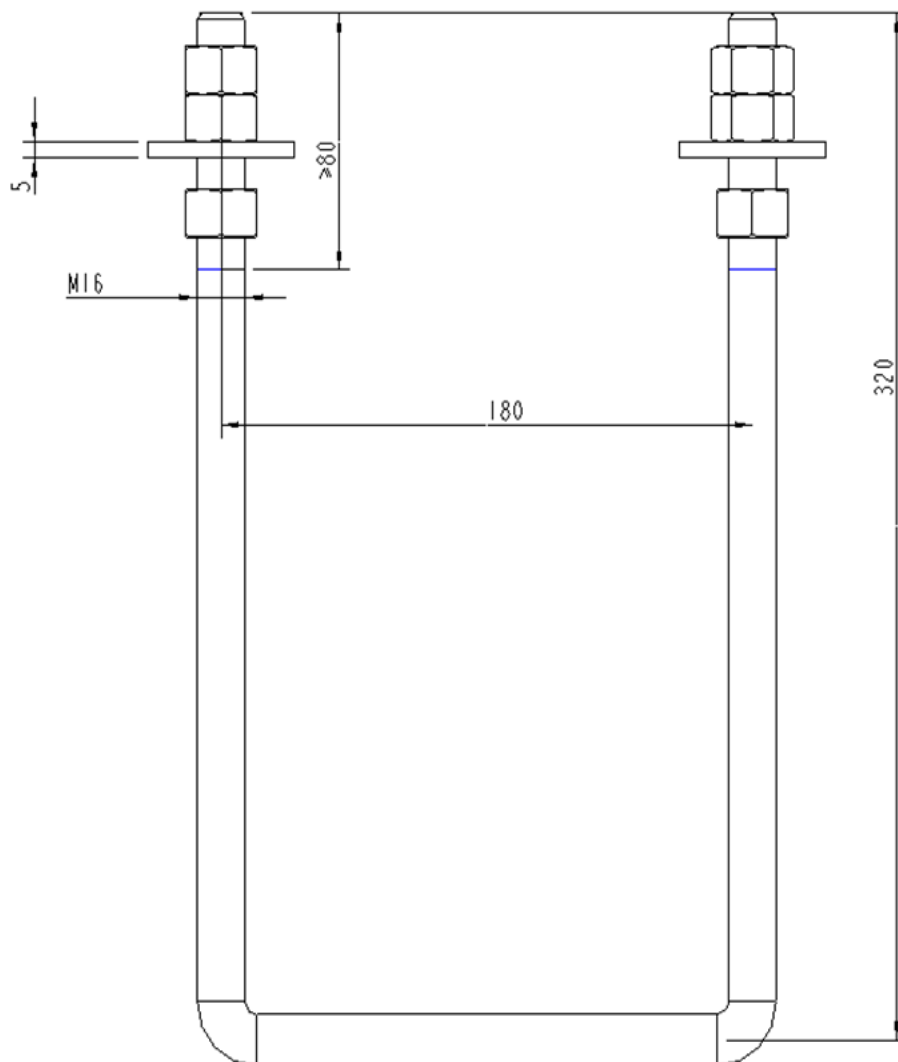
SECTION 3



TIE BEAM (TYP DETAILS)

STIRRUP DETAILS
 S1: -2 LEGGED Y8 @ 100 C/C
 S2: -2 LEGGED Y8 @ 200 C/C

Anchor Bolt Dimensions:



GENERAL DESCRIPTION

SCENE:

The basic wind speed of the solar bracket is related to the elevation angle of the photovoltaic panel. The basic wind speed for the elevation angle of 15, 25, 35, and 45 degrees is 40, 40, 35, and 31 m/s (3s time interval). The soil bearing capacity at the bottom of foundation should not be less than 100kPa. The support and foundation can be placed in flat terrain where the ground surface roughness category is C in ASCE 7-05 (B in GB50009-2001). In some particular scene, such as island and mountain peak, site designer should recheck the foundation design and modify the drawing.

FOUNDATION SELECTION PRINCIPLE:

1. Selection of foundation grade shall be decided by bracket height, angle.

NOTICE:

1. Wind speed is 3 second gust;
2. If site basic wind velocity exceed the design basic wind speed, or soil bearing capacity at the bottom of foundation is less than 100kPa (most is quicksand or swampland), foundation drawing should be modified. HQ GTS or R&D can be contacted.

说明

支架及基础应用场景:

该太阳能支架设计的基本风速与光伏板仰角有关，仰角为15、25、35、45度的基本风速为40、40、35、31m/s (3S时距)。按照光伏支架高度的不同分为：低支架基础和高支架基础。所有基础所在位置的地基承载力不小于100kPa。设计适用于美标C类(中类B类)地面粗糙度的平坦地区或稍有起伏地区，对于海岛或山峰等特殊地形的应用，需要站点设计人员根据实际情况对基础重新验算，并做相应的变形设计。

基础选型的一般原则:

1. 根据支架高度、角度的不同选择基础;

注:

1. 风速为3s时距;
2. 若站点基本风速高于基本风速，或者地基承载力低于100kPa(大部分为流沙或沼泽地区)，基础需重新设计。可以联系配套服务或机关研发人员。

客户:

签名: _____

分包商:



签名: _____

NOTES:

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项目:

Project:

备注:

Remark:

图名:

Drawing title:

备注: Sharp A Bracket 3.0 Foundation (High solar bracket)

Remark: A型支架3.0基础(高支架)

编码: Part-No:

版本: Version:

比例: Scale:

图号: NO.:

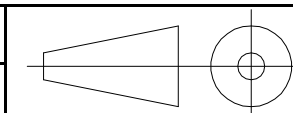
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设计: Designed:

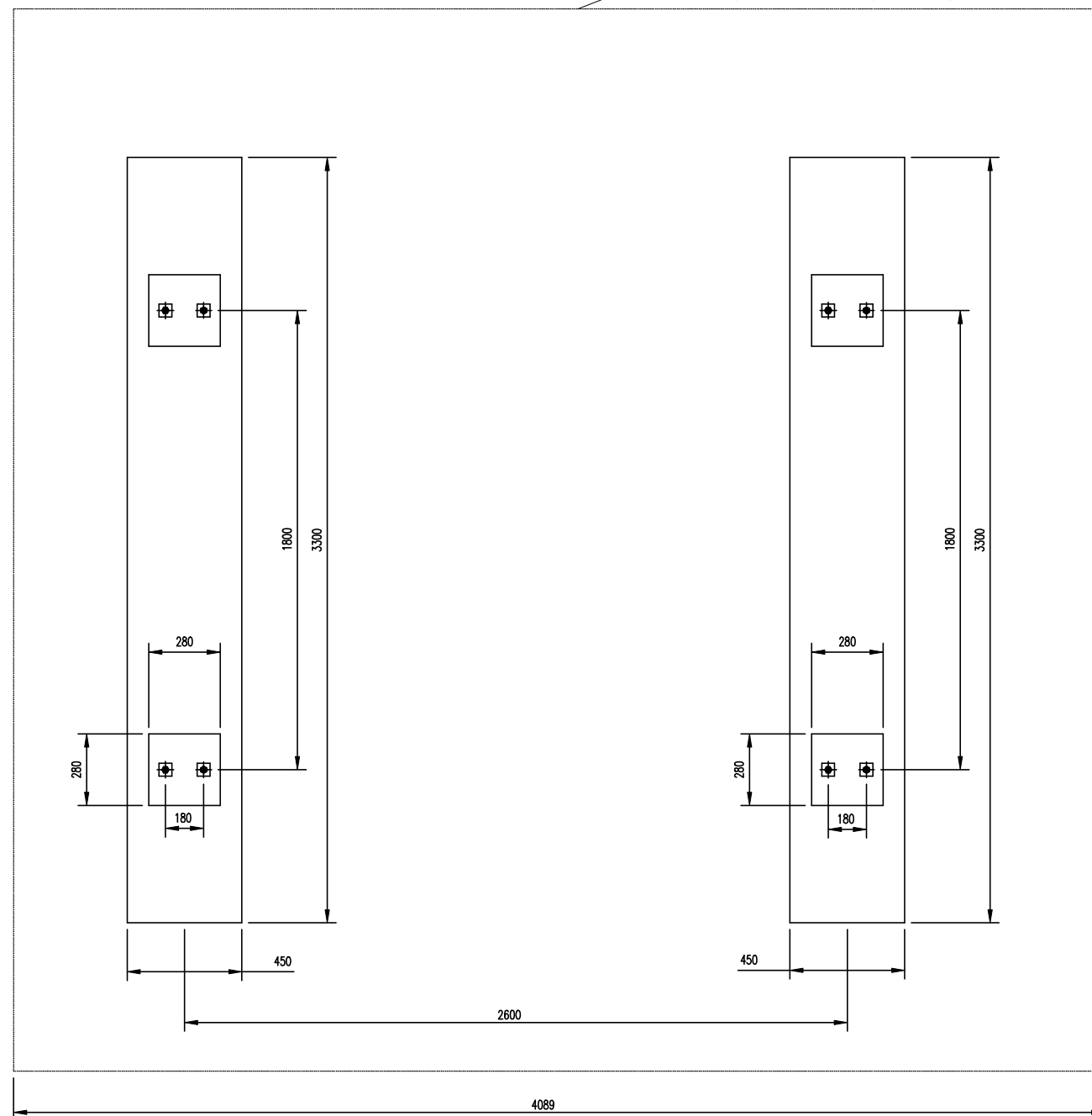
检查: Checked:

审核: Verified:

批准: Approved:



6X540W光伏组件轮廓线
Solar panel Contour(6X540W)



基础平面图 Foundation Plan

客户:

签名: _____

分包商:



签名: _____

NOTES:

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项目:

Project:

备注:

Remark:

图名:

Drawing title:

备注: Sharp A Bracket 3.0 Foundation (High solar bracket)

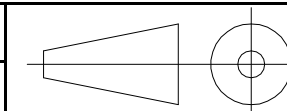
Remark: A型支架3.0基础(高支架)

编码:Part-No:

版本:Version:

比例:Scale:

图号:NO.:



结构编号:

设计:Designed:

检查:Checked:

审核:Verified:

批准:Approved:

单条基础钢筋表 Steel Bar List of Each Foundation

编号 No.	直径 Dia. d(mm)	间距 Spacing (mm)	A (mm)	B (mm)	C (mm)	长度 Length (mm)	数量 Quantity	总长 Total Length (m)	单位重量 Weight (Kg/m)	总重 Total Weight (Kg)
R01	10	175	50	3200	50	3300	3	9.9	0.62	19.53
R02	10	198	50	350	50	450	17	7.7	0.62	
R03	10	190	50	800	50	900	8	7.2	0.62	
R04	10	/	210	210	70	560	12	6.7	0.62	

单条基础混凝土用量和开挖 Concrete and Excavation List of Each Foundation

基础混凝土 Concrete (m ³)	垫层混凝土 Concrete Cushion (m ³)	土方开挖 Excavation (m ³)	土方回填 Backfill (m ³)
0.407	0.094	1.59	1.1

钢筋外形图 Steel bar shape

编号 No.	形状 Shape	长度 Length
R01	A-B-C	L=A+B+C
R02	A-B-C	L=A+B+C
R03	A-B-C	L=A+B+C
R04	A-B	L=2(A+B+C)

客户: _____

签名: _____

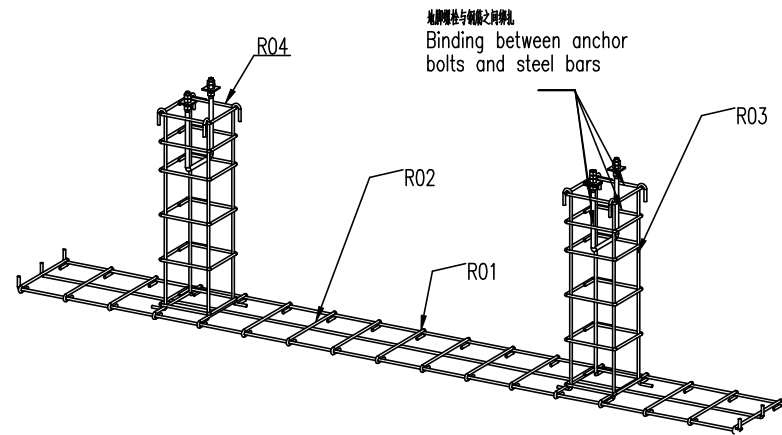
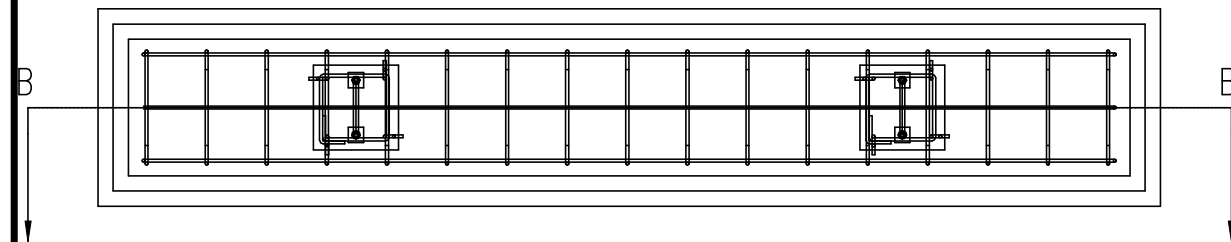
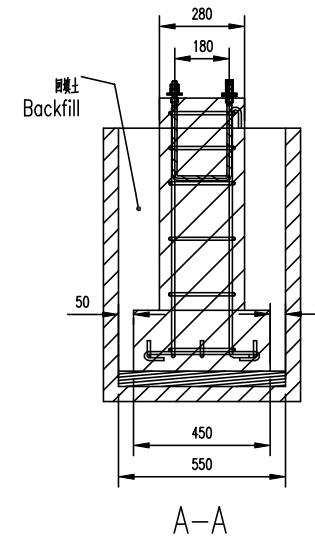
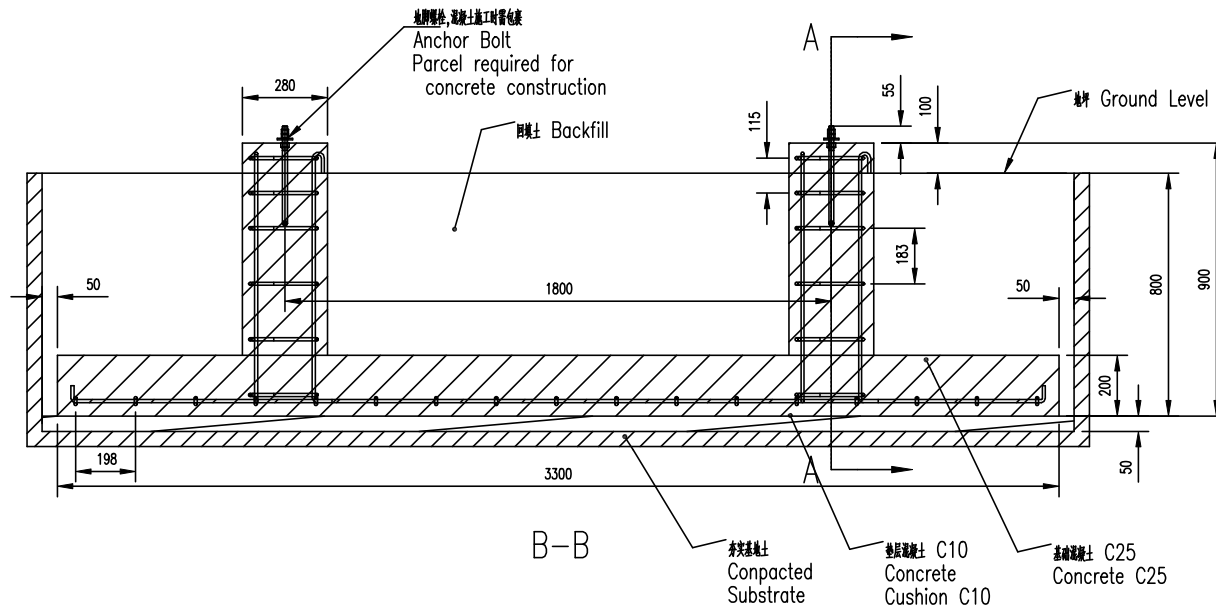
分包商: _____



签名: _____

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说明:

- Notes:
- 容许的施工误差: $\pm 3\text{mm}$;
Allow scope of Construction error: $\pm 3\text{mm}$;
 - 设计基本风速与仰角有关。
基底土承载力不小于 100kPa 。
The design basic wind speed is related to the elevation angle.
Basal soil bearing capacity(f_{ak}) should be more than 100kPa ,
除特别说明外,所有长度的单位均为mm;
 - All dimensions are millimeter unless otherwise stated;
 - 钢筋屈服强度: 335MPa ($d=10\text{mm}$);
Yield strength (yield point) of steel: 335MPa ($d=10\text{mm}$);
 - 基础混凝土:C25;垫层混凝土:C10
Concrete of Foundation:C25; Concrete Cushion: C10
 - 若未特别说明,基础保护层厚度一律采用50mm;
Thickness of Concrete Cover is 50mm unless otherwise stated;
 - 浇注混凝土前必须校正基础模板位置和尺寸正确;
Verify base dimension before casting concrete;
 - 基础浇注过程中必须进行振捣;
Vibration of concrete should be performed during pouring concrete;
 - 基础浇注完成后需养护至少3天;
Concrete surface should be kept wet for 3 days after casting;
 - 地脚螺栓绑在钢筋R04上。
Anchor bolt could be fixed on R04.

项目:

Project:

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版本:Version:

比例:Scale:

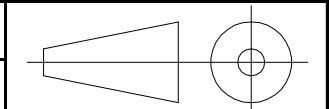
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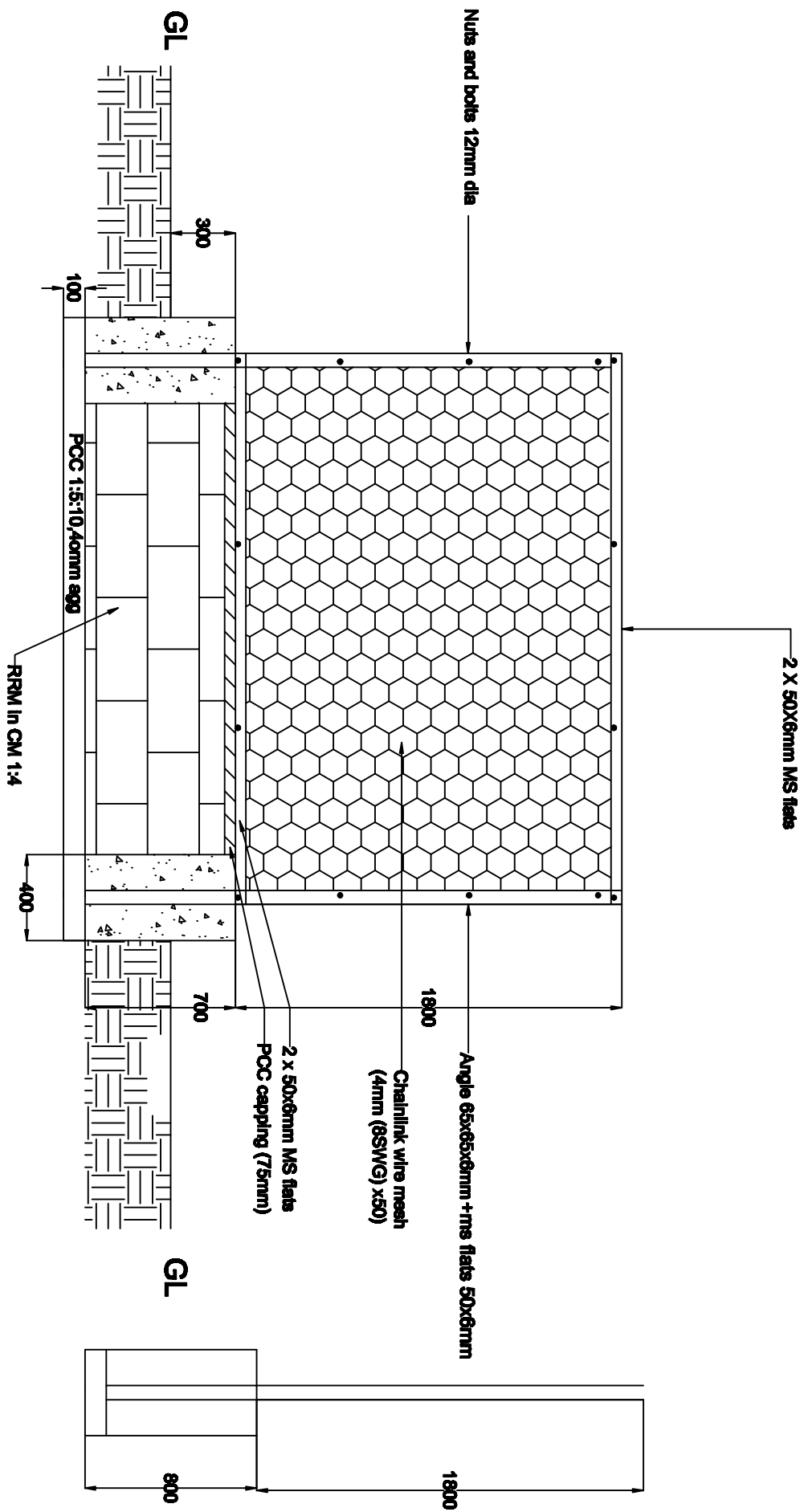
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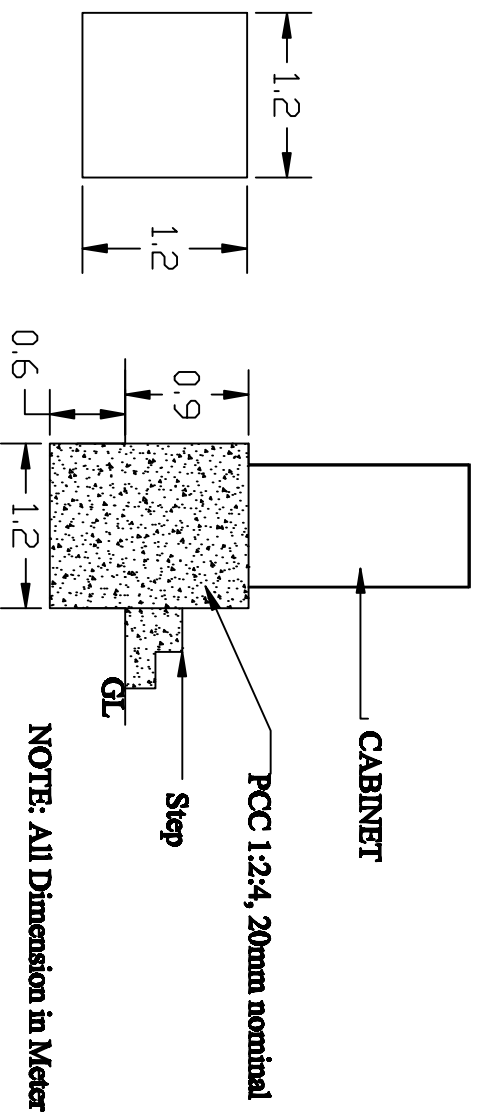
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批准:Approved:

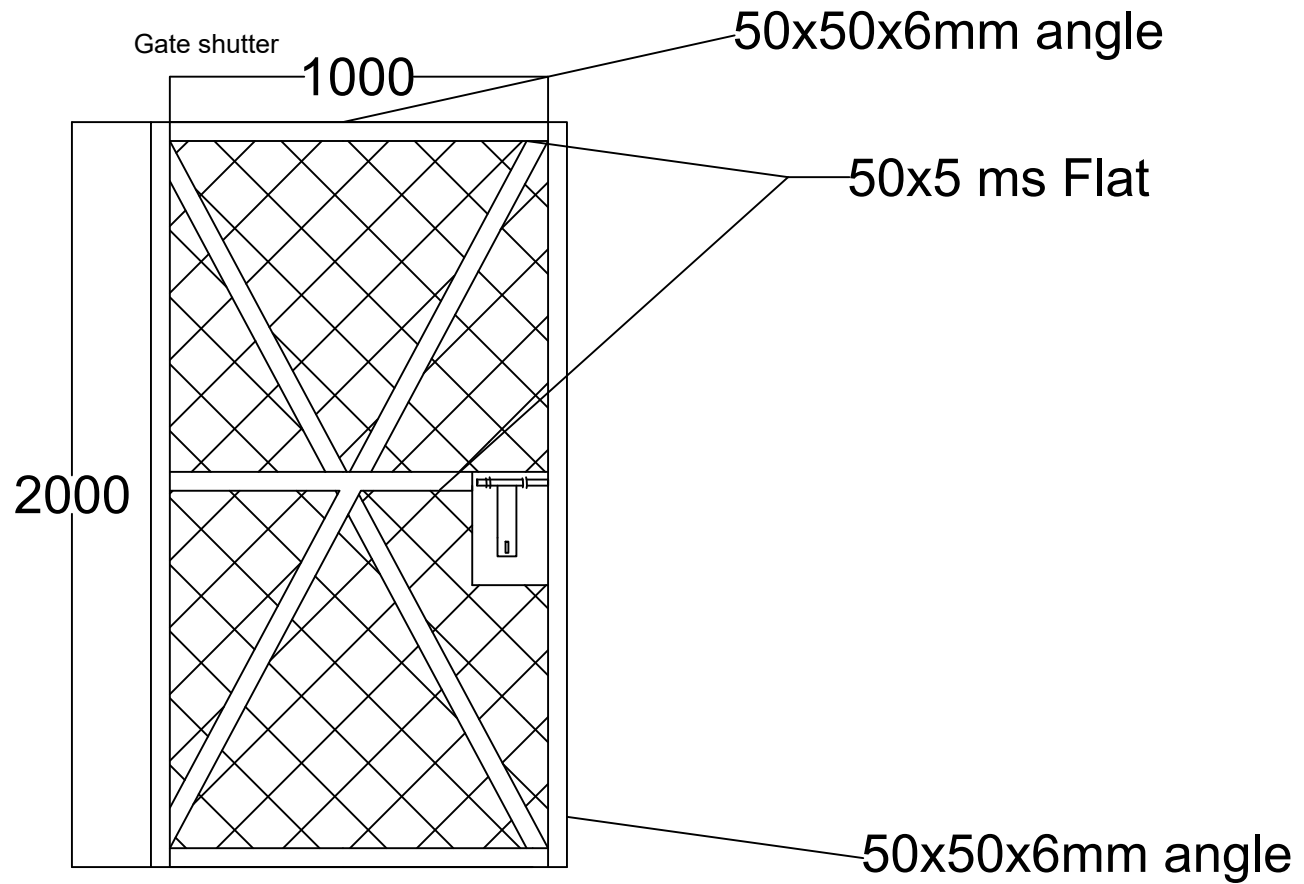


图号: NO.:





CABINET STAND FOR HIGH ALTITUDE



	Title : Barbed wire fencing	BHUTAN TELECOM LIMITED	
	Checked by:	Approved by:	